



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,442	01/30/2004	Eiichi Sato	WILL.0004	7205

7590 11/01/2006

REED SMITH LLP
Suite 1400
3110 Fairview Park Drive
Falls Church, VA 22042

EXAMINER

DUONG, THOMAS

ART UNIT PAPER NUMBER

2145

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/767,442

Applicant(s)

SATO, EIICHI

Examiner

Thomas Duong

Art Unit

2145

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 5-7, and 9-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5-7, and 9-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This office action is in response to the Applicant's Amendment filed on August 17, 2006. Applicant amended *claims 1, 9-11, 13, and 20*. *Claims 1, 5-7, and 9-33* are presented for further consideration and examination.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. *Claims 1, 11, 13, and 20* are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. With regards to *claims 1, 11, 13, and 20*, Applicant recites the limitation,
 - *"files by files basis"*This limitation renders the claim indefinite because it is unclear what constitutes the "files" (i.e., how many files are being grouped together and whether the first set of files has the same number of files as the second set of files).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 5-7, and 9-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Webber et al. (US005367698A), in view of Iwamura et al. (US 20040049553A1), in view of Ofek et al. (US006108748A), and further in view of Kenley et al. (US005276867A).

7. With regard to claims 1, 11, 13, and 20, Webber discloses,

- means for relating a plurality of shared file systems of the migration source file sharing device to the plurality of shared file systems of the migration destination file sharing device and for determining a mount point that corresponds the shared file systems of the migration source file sharing device to the shared file systems of the migration destination file sharing device, on a shared file system by shared file system basis, the mount point being used to mount one of the shared file systems of the migration source sharing device to one of the shared file systems of the migration destination sharing device, and the migration source shared file systems each having a plurality of files; (Webber, col.3, lines 22-62; col.7, line 37 – col.8, line 30)

Webber discloses, “in one aspect of the invention, the file storage management system includes a migration file server, in communication with the local network, having a migration storage means for storing data, and a first file transfer

element for transferring the data portion of selected data files from any of the client filesystems to the migration storage means” (Webber, col.3, lines 30-36).

In addition, Webber discloses, “migration server—an apparatus constructed and operated in accord with the invention, as described hereinafter, to provide file migration (bitfile) service to a set of client devices and client filesystems”

(Webber, col.4, lines 42-45). Webber also discloses, “client systems serviced by the migration server 110 can either be local file servers or individual workstations.

The migration file server 110 utilizes an architecture and protocol discussed hereinafter to enable efficient migration server/client communication, and rapid staging or transfer of files to and from the migration server” (Webber, col.4, line

68 – col.5, line 6). Webber discloses, “fig.2 illustrates the mapping between

client filesystems and client stores in the magnetic storage of the migration

server. As illustrated in fig.2, in accord with the invention, the data from files that have been migrated from each client are organized into one or more client stores

on the migration server” (Webber, col.6, lines 56-61). Hence, Webber teaches of

a data migration system that includes a plurality of filesystems to be migrated

and that a mapping of the file system or systems between the particular source

migration and the particular destination migration is maintained by the data

migration system.

- *means for setting or changing a migration status of each file; (Webber, col.3, lines 22-62; col.7, line 37 – col.8, line 30)*

Webber discloses, “provide such systems that are transparent to users and

applications programs, and which automatically operate with the characteristics

of magnetic disks in conjunction with user's existing or native file systems without

Art Unit: 2145

necessitating changes" (Webber, col.3, lines 7-12) and to *"provide such systems having automated and effective backup and file restore functions"* (Webber, col.3, lines 13-15). Hence, Webber teaches of utilizing a status to keep track of whether files are migrated or not.

However, Webber does not explicitly disclose,

- *means for relating a plurality of shared file systems of the migration source file sharing device to the plurality of shared file systems of the migration destination file sharing device and for determining a mount point that corresponds the shared file systems of the migration source file sharing device to the shared file systems of the migration destination file sharing device, on a shared file system by shared file system basis, the mount point being used to mount one of the shared file systems of the migration source sharing device to one of the shared file systems of the migration destination sharing device, and the migration source shared file systems each having a plurality of files;*
- *means for migrating files from the migration source file sharing device to the migration destination file sharing device on a files by files basis;*

Iwamura teaches,

- *means for relating a plurality of shared file systems of the migration source file sharing device to the plurality of shared file systems of the migration destination file sharing device and for determining a mount point that corresponds the shared file systems of the migration source file sharing device to the shared file systems of the migration destination file sharing device, on a shared file system by shared file system basis, the mount point being used to mount one of the shared file systems of the migration source sharing device to one of the shared file systems*

of the migration destination sharing device, and the migration source shared file systems each having a plurality of files (Iwamura, pg.1, para.6-11; pg.2, para.23-28, 32; pg.3, para.50; pg.4, para.53-61; pg.5, para.74-81; fig.3-4)

Iwamura discloses, *"the correspondence between the storage area created in the migration target storage subsystem 110 and the storage area in the migration source storage subsystem 100 which become a data migration source will be retained"* (Iwamura, pg.5, para.75). In addition, according to Iwamura, *"the correspondence information retained in the Step 401 to the data migration function 212 of the migration target storage subsystem 110, and request the migration target storage subsystem 110 so as to move data of the storage area existing in the migration source storage subsystem 100 to the migration target storage subsystem 110 (Step 407)"* (Iwamura, pg.5, para.81). Hence, Iwamura teaches of maintaining the correspondence information between the storage area of the target migration subsystem and the storage area of the migration source subsystem.

- *means for migrating files from the migration source file sharing device to the migration destination file sharing device on a files by files basis; (Iwamura, pg.4, para.56-61; fig.3)*

Iwamura discloses, *"data management for, for example, an I/O request from the host during data migration may be performed as described in, for example, the U.S. Pat. No. 6,108,748... [By] referring to a bit flag of this bit map, it is determined whether or not the data block has been transferred. If the data block requested from the host is not transferred to the migration transfer target storage subsystem, the I/O request may be transferred to the original storage subsystem*

to read the data block from there for transmitting to the host” (Iwamura, pg.3, para.50). Hence, Iwamura teaches that it is well known in the art to perform the method of data migration, wherein blocks of data (e.g., files, volumes) are migrated at a time.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Iwamura with the teachings of Webber to *“[provide a data processing system capable of easily performing a change in an accesses path of the storage subsystem associated with the data migration” (Iwamura, pg.1, para.6).*

In addition, The Examiner finds that the current amendment is contradictory to the previous argument presented on record. Specifically, referring to the Iwamura reference, the Applicant argued, in the amendment filed December 13, 2005, *“[i]n addition and in particular, this reference does not disclose, teach or suggest any structure or operation by which, among other features, data is migrated from the source file sharing device to the destination file sharing device on a file by file basis”* (Remarks, pg.15, para.1). In addition, the Applicant argued, in the amendment filed December 13, 2005, that *“Ofek ‘748 also cannot and does not disclose, teach or suggest any structure or operation by which, among other features, data is migrated from the source file sharing device to the destination file sharing device on a file by file basis”* (Remarks, pg.15, para.3). In addition, the Applicant’s representatives, Juan C. Marquez and Hiroshi Kawano, argued this particular point during the interview on December 16, 2005 in order to overcome the Iwamura and Ofek references. Hence, the Applicant clearly contradicts himself by currently amending the claims to state that the data migration is on a *“files by files basis”*.

However, Webber and Iwamura do not explicitly disclose,

- *means for causing access from the host computer to be switched from the migration source file sharing device to the migration destination file sharing device;*
- *means for detecting the migration status of a file to which access has been requested by the host computer;*
- *means for providing the file from the file system of the migration destination file sharing device to the host computer during the data migration in a case where the detected migration status of the file is a status where the file can be used from the file system of the migration destination file sharing device; and*
- *means for providing the file from the file system of the migration source file sharing device to the host computer during the data migration in a case where the detected migration status of the file is a status where the file cannot be used from the file system of the migration destination file sharing device.*

Ofek teaches,

- *means for causing access from the host computer to be switched from the migration source file sharing device to the migration destination file sharing device;* (Ofek, col.2, lines 49-52; col.7, lines 7-17)

Ofek teaches *"in the case of a read operation, [the] second data storage device examines the data map or table to determine whether or not the data has been migrated to and is stored on the second data storage device"* (Ofek, col.2, lines 49-52). Hence, Ofek teaches of a decision step to determining the location of the requested data (e.g., migrated data located on the second or destination storage

system or data not migrated located on the first or source storage system) in order to respond appropriately.

- *means for detecting the migration status of a file to which access has been requested by the host computer; (Ofek, col.2, lines 49-52; col.7, lines 7-17)*

Ofek teaches “in the case of a read operation, [the] second data storage device examines the data map or table to determine whether or not the data has been migrated to and is stored on the second data storage device” (Ofek, col.2, lines 49-52). Hence, Ofek teaches of a decision step to determining the location of the requested data (e.g., migrated data located on the second or destination storage system or data not migrated located on the first or source storage system) in order to respond appropriately.

- *means for providing the file from the file system of the migration destination file sharing device to the host computer during the data migration in a case where the detected migration status of the file is a status where the file can be used from the file system of the migration destination file sharing device; and (Ofek, col.2, lines 52-54; col.7, lines 22-26)*

Ofek teaches “if it is determined that the data is stored on the second data storage device, the data is made available to the requesting device” (Ofek, col.2, lines 52-54). Hence, Ofek teaches of making the requested data available to the requesting device from the second or destination storage system if the data has been migrated to it.

- *means for providing the file from the file system of the migration source file sharing device to the host computer during the data migration in a case where the detected migration status of the file is a status where the file cannot be used*

from the file system of the migration destination file sharing device. (Ofek, col.2, lines 55-61; col.7, lines 27-46)

Ofek teaches *"if the data is not stored on the second data storage device, the second data storage device issues a data request, in form of a read data command, to the first data storage device, obtains the data and makes the data available to the requesting device"* (Ofek, col.2, lines 55-59). Hence, Ofek teaches of making the requested data available to the requesting device from the first or source storage system if the data has not been migrated.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Ofek with the teachings of Webber and Iwamura to *"[allow] data migration between a first data storage system and a second data storage system while the database is open and a real-time data migration that is completely transparent to the host or data processing unit"* (Ofek, col.2, lines 12-16). Hence, Webber, Iwamura, and Ofek teach of the migration of data from a particular source migration file system or systems to a particular destination file system or systems through the use of mounting. In addition, during the data migration, if a client (i.e., Applicant's host computer) requests for a particular data (i.e., Applicant's file) that is not accessible at the destination file system or systems, then the data is obtained from the source file system or systems and delivered to the requesting client.

Even though Webber, Iwamura, and Ofek teach of the client requesting a particular data, which can be a particular file, the prior arts do not specifically disclose data as being a file.

The Examiner reiterates the Kenley reference, which specifically discloses the data migration on a file-by-file basis. Kenley discloses, *"the backup processor 12 scans the file system, e.g., the directories of system disks 18, for candidate files to copy to the baseline backup volume 20"* (Kenley, col.8, lines 44-46) and then *"the file is copied to the baseline backup volume 20"* (Kenley, col.8, lines 58-59). Furthermore, Kenley clearly states that this migration process takes places *"for each candidate file"* (Kenley, col.8, line 49) and more specifically, on a *"file-by-file basis"* (Kenley, col.14, lines 37-39). Hence, Kenley teaches of data migration on a file-by-file basis. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Kenley with the teachings of Webber, Iwamura, and Ofek to *"[allow] data migration between a first data storage system and a second data storage system while the database is open and a real-time data migration that is completely transparent to the host or data processing unit"* (Ofek, col.2, lines 12-16). In addition, according to Kenley, *"in view of these and other problems presented by prior art data storage, the object of this invention is to provide digital data storage systems having the speed and convenience of online data storage, and the economy of large capacity of offline storage. It is a further object of the invention to provide digital storage systems that incorporate improved data migration methods"* (Kenley, col.2, lines 18-25) and to *"[provide] a data migration system that reduces the time associated with conventional data migration schemes, to the point that data migration occurs in a manner that is 'transparent'— i.e., not discernable to the user"* (Kenley, col.2, line 26-30)

8. With regard to claims 5-7, Webber, lwamura, Ofek, and Kenley disclose,

- *further comprising means for updating the network environment information of the migration source file sharing device to other values after starting the migration destination file sharing device on the basis of temporary setting-use network environment information, and for causing causes the migration destination file sharing device to inherit the updated network environment information of the migration source file sharing device.* (Webber, col.3, lines 22-62; col.7, line 37 – col.8, line 30; lwamura, pg.1, para.6-11; pg.2, para.23-28, 32; pg.3, para.50; pg.4, para.53-61; pg.5, para.74-81; fig.3-4; Ofek, col.2, lines 49-52, lines 55-61; col.7, lines 7-17, lines 27-46)
- *further comprising monitoring means for monitoring whether or not the network environment information of the migration source file sharing device has been updated to the other values.* (Webber, col.3, lines 22-62; col.7, line 37 – col.8, line 30; lwamura, pg.1, para.6-11; pg.2, para.23-28, 32; pg.3, para.50; pg.4, para.53-61; pg.5, para.74-81; fig.3-4; Ofek, col.2, lines 49-52, lines 55-61; col.7, lines 7-17, lines 27-46)
- *wherein the inheriting of the network environment information from the migration source file sharing device and the updating of the network environment information of the migration source file sharing device are respectively conducted by remote control.* (Webber, col.3, lines 22-62; col.7, line 37 – col.8, line 30; lwamura, pg.1, para.6-11; pg.2, para.23-28, 32; pg.3, para.50; pg.4, para.53-61; pg.5, para.74-81; fig.3-4; Ofek, col.2, lines 49-52, lines 55-61; col.7, lines 7-17, lines 27-46)

Art Unit: 2145

9. With regard to claim 9, Webber, Iwamura, Ofek, and Kenley disclose,
- *further including use frequency detecting means that detects the use frequency of files that cannot be used from the file system of the migration destination file sharing device, wherein data migrating priority is given to files whose use frequency detected by the use frequency detecting means is equal to or greater than a predetermined value. (Ofek, col.3, line 55 – col.4, line 4)*
10. With regard to claim 10, Webber, Iwamura, Ofek, and Kenley disclose,
- *wherein data migration statuses include*
 - *a first migration status representing a status where migration of a file from the file system of the migration source file sharing device to the file system of the migration destination file sharing device has not been conducted, (Webber, col.3, lines 22-62; col.7, line 37 – col.8, line 30; Iwamura, pg.1, para.6-11; pg.2, para.23-28, 32; pg.3, para.50; pg.4, para.53-61; pg.5, para.74-81; fig.3-4; Ofek, col.2, lines 49-52, lines 55-61; col.7, lines 7-17, lines 27-46)*
 - *a second migration status representing a status where the file is migrating from the file system of the migration source file sharing device to the file system of the migration destination file sharing device, (Webber, col.3, lines 22-62; col.7, line 37 – col.8, line 30; Iwamura, pg.1, para.6-11; pg.2, para.23-28, 32; pg.3, para.50; pg.4, para.53-61; pg.5, para.74-81; fig.3-4; Ofek, col.2, lines 49-52, lines 55-61; col.7, lines 7-17, lines 27-46)*
 - *a third migration status representing a status where migration of the file from the file system of the migration source file sharing device to the file*

system of the migration destination file sharing device has been completed, and (Webber, col.3, lines 22-62; col.7, line 37 – col.8, line 30; lwamura, pg.1, para.6-11; pg.2, para.23-28, 32; pg.3, para.50; pg.4, para.53-61; pg.5, para.74-81; fig.3-4; Ofek, col.2, lines 49-52, lines 55-61; col.7, lines 7-17, lines 27-46)

- *a fourth migration status representing a status where the file is being provided from the file system of the migration source file sharing device; and (Webber, col.3, lines 22-62; col.7, line 37 – col.8, line 30; lwamura, pg.1, para.6-11; pg.2, para.23-28, 32; pg.3, para.50; pg.4, para.53-61; pg.5, para.74-81; fig.3-4; Ofek, col.2, lines 49-52, lines 55-61; col.7, lines 7-17, lines 27-46)*
- *in the case of the first migration status, a migration status of file to which access has been requested is changed to the fourth migration status, provides the file from the file system of the migration source file sharing device, and thereafter returns the migration status of the file to the first migration status, (Ofek, col.2, lines 55-61; col.7, lines 27-46, col.8, line 25 – col.9, line 27, col.9, lines 45-67, col.10, lines 14-58)*
- *in the case of the second migration status, the file from the file system of the migration source file sharing device is provided in a read-only mode, (Ofek, col.2, lines 55-61; col.7, lines 27-46, col.8, line 25 – col.9, line 27, col.9, lines 45-67, col.10, lines 14-58)*
- *in the case of the third migration status, the file from the file system of the migration destination file sharing device is provided, and (Ofek, col.2,*

Art Unit: 2145

lines 55-61; col.7, lines 27-46, col.8, line 25 – col.9, line 27, col.9, lines 45-67, col.10, lines 14-58)

- *in the case of the fourth migration status, the file from the file system of the migration source file sharing system is provided in the read-only mode and thereafter the migration status of the file is changed to the first migration status. (Ofek, col.2, lines 55-61; col.7, lines 27-46, col.8, line 25 – col.9, line 27, col.9, lines 45-67, col.10, lines 14-58)*

11. With regard to claim 12, Webber, Iwamura, Ofek, and Kenley disclose,

- *wherein the step of causing access from the host computer to be switched to the migration destination file sharing device is one that causes access from the host computer to be switched from the migration source file sharing device to the migration destination file sharing device without changing network connection information that is set in the host computer. (Webber, col.3, lines 22-62; col.7, line 37 – col.8, line 30; Iwamura, pg.1, para.6-11; pg.2, para.23-28, 32; pg.3, para.50; pg.4, para.53-61; pg.5, para.74-81; fig.3-4; Ofek, col.2, lines 49-52, lines 55-61; col.7, lines 7-17, lines 27-46)*

12. With regard to claims 14, 16, 18, and 24, Webber, Iwamura, Ofek, and Kenley disclose,

- *further comprising:*
 - *means for causing the migration destination file sharing device to inherit, prior to data migration, network environment information for identifying the migration source file sharing device on the communications network.*

(Iwamura, pg.1, para.6-11; pg.2, para.23-28, 32; pg.3, para.50; pg.4, para.53-61; pg.5, para.74-81; fig.3-4)

Iwamura teaches *"before the data migration, the migration source storage system 100 is assigned Address A as the IP address"* (Iwamura, pg.4, para.56), *"next, the IP address which has been assigned to the migration source storage subsystem 100 will be changed from such Address A ... to such a different Address B"* (Iwamura, pg.4, para.59), *"next, the IP address of the migration target storage subsystem 110 will be assigned to Address A"* (Iwamura, pg.4, para.60) making it *"possible to obtain access to the migration target storage subsystem 110 through the use of the Address A"* (Iwamura, pg.4, para.56). In addition, Iwamura teaches *"in the migration target storage subsystem 110, there will be provided the same storage area ... as the storage area ... which the migration source storage subsystem 100 has (copy of configuration 321)"* (Iwamura, pg.4, para.57). Hence, Iwamura teaches of the migration destination inheriting the configuration and network identification information of the migration source before the migration.

13. With regard to claims 15, 17, and 19, Webber, Iwamura, Ofek, and Kenley disclose,
- *wherein the means for relating the shared file system of the migration destination file sharing device with the shared file system of the migration source file sharing device copies a name of the shared file system of the migration source file sharing device so as to be a name of the shared file system of the migration destination file sharing device.* (Iwamura, pg.1, para.6-11; pg.2, para.23-28, 32; pg.3, para.50; pg.4, para.53-61; pg.5, para.74-81; fig.3-4)

14. With regard to claims 21-23, Webber, Iwamura, Ofek, and Kenley disclose,

- *wherein the means for causing the migration destination file sharing device to inherit, prior to data migration, network environment information for identifying the migration source file sharing device on the communications network further includes:*
 - *means for acquiring the network environment information from the migration source file sharing device, (Iwamura, pg.1, para.6-11; pg.2, para.23-28, 32; pg.3, para.50; pg.4, para.53-61; pg.5, para.74-81; fig.3-4)*
 - *means for changing the network environment information into change-use network environment information and for restarting the migration source file sharing device, (Iwamura, pg.1, para.6-11; pg.2, para.23-28, 32; pg.3, para.50; pg.4, para.53-61; pg.5, para.74-81; fig.3-4)*
 - *means for confirming whether the migration source file sharing device restarts with the change-use network environment information, and (Iwamura, pg.1, para.6-11; pg.2, para.23-28, 32; pg.3, para.50; pg.4, para.53-61; pg.5, para.74-81; fig.3-4)*
 - *means for changing network environment information of the migration destination file sharing device into the original network environment information of the migration source file sharing device. (Iwamura, pg.1, para.6-11; pg.2, para.23-28, 32; pg.3, para.50; pg.4, para.53-61; pg.5, para.74-81; fig.3-4)*

Art Unit: 2145

15. With regard to claim 25, Webber, Iwamura, Ofek, and Kenley disclose,

- *wherein the eighth component is further formed to acquire the network environment information from the migration source file sharing device, to change the network environment information into change-use network environment information and for restarting the migration source file sharing device, to confirm whether the migration source file sharing device restarts with the change-use network environment information, and to change network environment information of the migration destination file sharing device into the original network environment information of the migration source file sharing device.* (Iwamura, pg.1, para.6-11; pg.2, para.23-28, 32; pg.3, para.50; pg.4, para.53-61; pg.5, para.74-81; fig.3-4)

16. With regard to claims 26, 28, 30, and 32, Webber, Iwamura, Ofek, and Kenley disclose,

- *wherein said means for relating the shared file system of the migration source file sharing device to the shared file system of the migration destination file sharing device is further configured to correspond a name of a migration source host, a name of the shared file system of the migration source file sharing device, the mount point that corresponds the shared file system of the migration source file sharing device to the shared file system of the migration destination file sharing device, a name of the shared file system of the migration destination file sharing device, and a file migration status of files to be migrated to each other.* (Iwamura, pg.1, para.6-11; pg.2, para.23-28, 32; pg.3, para.50; pg.4, para.53-61; pg.5, para.74-81; fig.3-4)

Art Unit: 2145

17. With regard to claims 27, 29, 31, and 33, Webber, Iwamura, Ofek, and Kenley disclose,
- *wherein said means for relating the shared file system of the migration source file sharing device to the shared file system of the migration destination file sharing device is further configured to correspond a name of a migration source host, a name of the shared file system of the migration source file sharing device, and a name of the shared file system of the migration destination file sharing device to each other.* (Iwamura, pg.1, para.6-11; pg.2, para.23-28, 32; pg.3, para.50; pg.4, para.53-61; pg.5, para.74-81; fig.3-4)

Response to Arguments

18. Applicant's arguments with respect to *claims 1, 11, 13, and 20* have been considered but they are not persuasive.
19. With regard to claims 1, 11, 13, and 20, the Applicants point out that:
- *In contrast to the present invention, the primary reference of Kenley '867 is directed only to a digital data storage apparatus that is limited to a single processor 12 connected to several devices, including an administration database 14, system disks 18, and backup volumes 20,24. However, because Kenley '867 only discloses a single processor 12, this reference only teaches the structure and operation of a single computer. By itself, Kenley '867 cannot show or suggest, among other features, any structure or operation involving any device, method, program or system related to migrating data from a file system of a migration source file sharing device to a file system of a migration destination file sharing device via a communications network. Further, because this reference is*

so limited, it also cannot show or suggest any device, method, program or system that involves, among other features, relating a plurality of shared file systems of the migration source file sharing device to a plurality of shared file systems of the migration destination file sharing device, determining a mount point that corresponds the shared file systems of the migration source file sharing device to the shared file systems of the migration destination file sharing device, the mount point being used to mount one of the shared file systems of the migration source sharing device to one of the shared file systems of the migration destination sharing device, the migration source shared file systems each having a plurality of files; migrating files from the migration source file sharing device to the migration destination file sharing device on a files by files basis; detecting the migration status of a file to which access has been requested by the host computer; providing the file from the file system of the migration destination file sharing device to the host computer during the data migration in a case where the detected migration status of the file is a status where the file can be used from the file system of the migration destination file sharing device; and providing the file from the file system of the migration source file sharing device to the host computer during the data migration in a case where the detected migration status of the file is a status where the file cannot be used from the file system of the migration destination file sharing device. In effect, since Kenley '867 is limited to disclosing a single processor 12, this reference cannot disclose or suggest any teaching relating to a system involving a network of plural host computers accessing plural storage systems that communicate using for example NFS and/or CIFS protocols, each storage system potentially having its own separate

file system, where the different file systems are related to one another through a mount point relationship, such as by using a table that specifies that relationship.

However, the Examiner finds that the Applicant's argument is moot because of the rejection stated above.

20. With regard to claims 1, 11, 13, and 20, the Applicants point out that:

- In contrast to the present invention, the primary reference of Kenley '867 is directed only to a digital data storage apparatus that is limited to a single processor 12 connected to several devices, including an administration database 14, system disks 18, and backup volumes 20,24. However, because Kenley '867 only discloses a single processor 12, this reference only teaches the structure and operation of a single computer. By itself, Kenley '867 cannot show or suggest, among other features, any structure or operation involving any device, method, program or system related to migrating data from a file system of a migration source file sharing device to a file system of a migration destination file sharing device via a communications network. Further, because this reference is so limited, it also cannot show or suggest any device, method, program or system that involves, among other features, relating a plurality of shared file systems of the migration source file sharing device to a plurality of shared file systems of the migration destination file sharing device, determining a mount point that corresponds the shared file systems of the migration source file sharing device to the shared file systems of the migration destination file sharing device, the mount point being used to mount one of the shared file systems of the migration source sharing device to one of the shared file systems of the migration*

destination sharing device, the migration source shared file systems each having a plurality of files; migrating files from the migration source file sharing device to the migration destination file sharing device on a files by files basis; detecting the migration status of a file to which access has been requested by the host computer; providing the file from the file system of the migration destination file sharing device to the host computer during the data migration in a case where the detected migration status of the file is a status where the file can be used from the file system of the migration destination file sharing device; and providing the file from the file system of the migration source file sharing device to the host computer during the data migration in a case where the detected migration status of the file is a status where the file cannot be used from the file system of the migration destination file sharing device. In effect, since Kenley '867 is limited to disclosing a single processor 12, this reference cannot disclose or suggest any teaching relating to a system involving a network of plural host computers accessing plural storage systems that communicate using for example NFS and/or CIFS protocols, each storage system potentially having its own separate file system, where the different file systems are related to one another through a mount point relationship, such as by using a table that specifies that relationship.

However, the Examiner finds that the Applicant's argument is not persuasive because the current argument is contradictory to the previous argument presented on record. Specifically, referring to the Iwamura reference, the Applicant argued, in the amendment filed December 13, 2005, "[i]n addition and in particular, this reference does not disclose, teach or suggest any structure or operation by which, among other features, data is migrated from the source file sharing device to the destination

file sharing device on a file by file basis" (Remarks, pg.15, para.1). In addition, the Applicant argued, in the amendment filed December 13, 2005, that "Ofek '748 also cannot and does not disclose, teach or suggest any structure or operation by which, among other features, data is migrated from the source file sharing device to the destination file sharing device on a file by file basis" (Remarks, pg.15, para.3). In addition, the Applicant's representatives, Juan C. Marquez and Hiroshi Kawano, argued this particular point during the interview on December 16, 2005 in order to overcome the Iwamura and Ofek references. Hence, the Applicant clearly contradicts himself by currently amending the claims to state that the data migration is on a "files by files basis". Furthermore, Iwamura discloses, "[by] referring to a bit flag of this bit map, it is determined whether or not the data block has been transferred. If the data block requested from the host is not transferred to the migration transfer storage subsystem, the I/O request may be transferred to the original storage subsystem to read the data block from there for transmitting to the host" (Iwamura, pg.3, para.50). Hence, Iwamura teaches of a migration of data system that can fulfill a request for unmigrated data by deferring to the original storage subsystem to fulfill the request.

Conclusion

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE

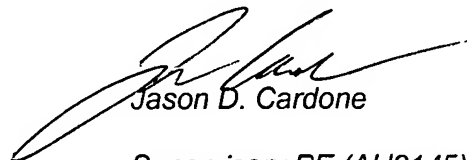
Art Unit: 2145

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Duong whose telephone number is 571/272-3911. The examiner can normally be reached on M-F 7:30AM - 4:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason D. Cardone can be reached on 571/272-3933. The fax phone numbers for the organization where this application or proceeding is assigned are 571/273-8300 for regular communications and 571/273-8300 for After Final communications.

Thomas Duong (AU2145)

October 27, 2006


Jason D. Cardone
Supervisory PE (AU2145)